

Niclas Roxhed

List of Publications by Year in descending order

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Version: 2024-02-01

78
papers

2,879
citations

172457

29
h-index

175258

52
g-index

80
all docs

80
docs citations

80
times ranked

3541
citing authors

#	ARTICLE	IF	CITATIONS
1	An ingestible self-orienting system for oral delivery of macromolecules. <i>Science</i> , 2019, 363, 611-615.	12.6	287
2	Integrating MEMS and ICs. <i>Microsystems and Nanoengineering</i> , 2015, 1, .	7.0	242
3	A luminal unfolding microneedle injector for oral delivery of macromolecules. <i>Nature Medicine</i> , 2019, 25, 1512-1518.	30.7	167
4	Penetration-Enhanced Ultrasharp Microneedles and Prediction on Skin Interaction for Efficient Transdermal Drug Delivery. <i>Journal of Microelectromechanical Systems</i> , 2007, 16, 1429-1440.	2.5	153
5	Prolonged energy harvesting for ingestible devices. <i>Nature Biomedical Engineering</i> , 2017, 1, .	22.5	148
6	Painless Drug Delivery Through Microneedle-Based Transdermal Patches Featuring Active Infusion. <i>IEEE Transactions on Biomedical Engineering</i> , 2008, 55, 1063-1071.	4.2	121
7	Real-time intradermal continuous glucose monitoring using a minimally invasive microneedle-based system. <i>Biomedical Microdevices</i> , 2018, 20, 101.	2.8	116
8	Wearable All-Solid-State Potentiometric Microneedle Patch for Intradermal Potassium Detection. <i>Analytical Chemistry</i> , 2019, 91, 1578-1586.	6.5	116
9	Novel Microneedle Patches for Active Insulin Delivery are Efficient in Maintaining Glycaemic Control: An Initial Comparison with Subcutaneous Administration. <i>Pharmaceutical Research</i> , 2007, 24, 1381-1388.	3.5	103
10	Large-area integration of two-dimensional materials and their heterostructures by wafer bonding. <i>Nature Communications</i> , 2021, 12, 917.	12.8	99
11	Membrane-sealed hollow microneedles and related administration schemes for transdermal drug delivery. <i>Biomedical Microdevices</i> , 2008, 10, 271-279.	2.8	82
12	A fast passive and planar liquid sample micromixer. <i>Lab on A Chip</i> , 2004, 4, 214-219.	6.0	70
13	A microneedle platform for buccal macromolecule delivery. <i>Science Advances</i> , 2021, 7, .	10.3	70
14	Oral delivery of systemic monoclonal antibodies, peptides and small molecules using gastric auto-injectors. <i>Nature Biotechnology</i> , 2022, 40, 103-109.	17.5	64
15	A liquid-triggered liquid microvalve for on-chip flow control. <i>Sensors and Actuators B: Chemical</i> , 2004, 100, 463-468.	7.8	63
16	Flexible and Stretchable Microneedle Patches with Integrated Rigid Stainless Steel Microneedles for Transdermal Biointerfacing. <i>PLoS ONE</i> , 2016, 11, e0166330.	2.5	59
17	A disposable sampling device to collect volume-measured DBS directly from a fingerprick onto DBS paper. <i>Bioanalysis</i> , 2015, 7, 2085-2094.	1.5	56
18	A method for tapered deep reactive ion etching using a modified Bosch process. <i>Journal of Micromechanics and Microengineering</i> , 2007, 17, 1087-1092.	2.6	53

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19	Ultra-miniaturization of a planar amperometric sensor targeting continuous intradermal glucose monitoring. <i>Biosensors and Bioelectronics</i> , 2017, 90, 577-583.	10.1	46
20	Pt-Al ₂ O ₃ dual layer atomic layer deposition coating in high aspect ratio nanopores. <i>Nanotechnology</i> , 2013, 24, 015602.	2.6	42
21	High-Yield Passive Plasma Filtration from Human Finger Prick Blood. <i>Analytical Chemistry</i> , 2018, 90, 13393-13399.	6.5	42
22	Wafer bonding with nano-imprint resists as sacrificial adhesive for fabrication of silicon-on-integrated-circuit (SOIC) wafers in 3D integration of MEMS and ICs. <i>Sensors and Actuators A: Physical</i> , 2009, 154, 180-186.	4.1	39
23	An amperometric nitric oxide sensor with fast response and ppb-level concentration detection relevant to asthma monitoring. <i>Sensors and Actuators B: Chemical</i> , 2015, 209, 639-644.	7.8	39
24	A gastric resident drug delivery system for prolonged gram-level dosing of tuberculosis treatment. <i>Science Translational Medicine</i> , 2019, 11, .	12.4	38
25	CMOS-Integrated Si/SiGe Quantum-Well Infrared Microbolometer Focal Plane Arrays Manufactured With Very Large-Scale Heterogeneous 3-D Integration. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2015, 21, 30-40.	2.9	35
26	Ingestible transiently anchoring electronics for microstimulation and conductive signaling. <i>Science Advances</i> , 2020, 6, eaaz0127.	10.3	35
27	High-Aspect-Ratio Through Silicon Vias for High-Frequency Application Fabricated by Magnetic Assembly of Gold-Coated Nickel Wires. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2015, 5, 21-27.	2.5	34
28	Multianalyte serology in home-sampled blood enables an unbiased assessment of the immune response against SARS-CoV-2. <i>Nature Communications</i> , 2021, 12, 3695.	12.8	32
29	Very high aspect ratio through-silicon vias (TSVs) fabricated using automated magnetic assembly of nickel wires. <i>Journal of Micromechanics and Microengineering</i> , 2012, 22, 105001.	2.6	31
30	Intradermal Insulin Delivery. <i>Journal of Diabetes Science and Technology</i> , 2014, 8, 453-457.	2.2	31
31	The effect of drying on the homogeneity of DBS. <i>Bioanalysis</i> , 2015, 7, 1977-1985.	1.5	30
32	Static Zero-Power-Consumption Coplanar Waveguide Embedded DC-to-RF Metal-Contact MEMS Switches in Two-Port and Three-Port Configuration. <i>IEEE Transactions on Electron Devices</i> , 2010, 57, 1659-1669.	3.0	26
33	An Autonomous Microfluidic Device for Generating Volume-Defined Dried Plasma Spots. <i>Analytical Chemistry</i> , 2019, 91, 7125-7130.	6.5	21
34	Nanopore arrays in a silicon membrane for parallel single-molecule detection: fabrication. <i>Nanotechnology</i> , 2015, 26, 314001.	2.6	20
35	Wafer-Level Vacuum Sealing by Transfer Bonding of Silicon Caps for Small Footprint and Ultra-Thin MEMS Packages. <i>Journal of Microelectromechanical Systems</i> , 2019, 28, 460-471.	2.5	20
36	Very large scale heterogeneous integration (VLSHI) and wafer-level vacuum packaging for infrared bolometer focal plane arrays. <i>Infrared Physics and Technology</i> , 2013, 60, 251-259.	2.9	18

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37	Evaluation of a Volumetric Dried Blood Spot Card Using a Gravimetric Method and a Bioanalytical Method with Capillary Blood from 44 Volunteers. <i>Analytical Chemistry</i> , 2019, 91, 5558-5565.	6.5	18
38	Electrochemically Assisted Maskless Selective Removal of Metal Layers for Three-Dimensional Micromachined SOI RF MEMS Transmission Lines and Devices. <i>Journal of Microelectromechanical Systems</i> , 2011, 20, 899-908.	2.5	16
39	A compact, low-cost microliter-range liquid dispenser based on expandable microspheres. <i>Journal of Micromechanics and Microengineering</i> , 2006, 16, 2740-2746.	2.6	15
40	High-performance quantum-well silicon-germanium bolometers using IC-compatible integration for low-cost infrared imagers. , 2009, , .		13
41	Low-cost uncooled microbolometers for thermal imaging. <i>Proceedings of SPIE</i> , 2010, , .	0.8	13
42	Coplanar-waveguide embedded mechanically-bistable DC-to-RF MEMS switches. , 2007, , .		11
43	A wafer-level liquid cavity integrated amperometric gas sensor with ppb-level nitric oxide gas sensitivity. <i>Journal of Micromechanics and Microengineering</i> , 2015, 25, 105013.	2.6	9
44	A Miniaturized Amperometric Hydrogen Sulfide Sensor Applicable for Bad Breath Monitoring. <i>Micromachines</i> , 2018, 9, 612.	2.9	9
45	Gas diffusion and evaporation control using EWOD actuation of ionic liquid microdroplets for gas sensing applications. <i>Sensors and Actuators B: Chemical</i> , 2018, 267, 647-654.	7.8	9
46	A microfluidic device for TEM sample preparation. <i>Lab on A Chip</i> , 2020, 20, 4186-4193.	6.0	9
47	Hermetic integration of liquids using high-speed stud bump bonding for cavity sealing at the wafer level. <i>Journal of Micromechanics and Microengineering</i> , 2012, 22, 045021.	2.6	8
48	Toward 17 μ m pitch heterogeneously integrated Si/SiGe quantum well bolometer focal plane arrays. <i>Proceedings of SPIE</i> , 2011, , .	0.8	7
49	Batch Transfer of Radially Expanded Die Arrays for Heterogeneous Integration Using Different Wafer Sizes. <i>Journal of Microelectromechanical Systems</i> , 2012, 21, 1077-1083.	2.5	7
50	A MEMS-based passive hydrocephalus shunt for body position controlled intracranial pressure regulation. <i>Biomedical Microdevices</i> , 2014, 16, 529-536.	2.8	7
51	Wafer-Scale Transfer of Graphene by Adhesive Wafer Bonding. , 2019, , .		7
52	Tapered Deep Reactive Ion Etching: Method and Characterization. , 2007, , .		6
53	Wafer-level heterogeneous 3D integration for MEMS and NEMS. , 2012, , .		5
54	Wafer-Level Vacuum Sealing by Coining of Wire Bonded Gold Bumps. <i>Journal of Microelectromechanical Systems</i> , 2013, 22, 1347-1353.	2.5	5

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55	Oxidation of nanopores in a silicon membrane: self-limiting formation of sub-10 nm circular openings. <i>Nanotechnology</i> , 2014, 25, 355302.	2.6	5
56	A Self-Sealing Spray Nozzle for Aerosol Drug Delivery. <i>Journal of Microelectromechanical Systems</i> , 2020, 29, 182-189.	2.5	5
57	Vertical integration of microchips by magnetic assembly and edge wire bonding. <i>Microsystems and Nanoengineering</i> , 2020, 6, 12.	7.0	5
58	Mechanically tri-stable SPDT metal-contact MEMS switch embedded in 3D transmission line. , 2007, , .		4
59	Temporary Wafer Bonding and Debonding for 3D Integration Using an Electrochemically Active Polymer Adhesive. <i>ECS Journal of Solid State Science and Technology</i> , 2014, 3, P115-P121.	1.8	4
60	Large-Scale Integration of 2D Material Heterostructures by Adhesive Bonding. , 2020, , .		4
61	Mechanically tri-stable SPDT metal-contact MEMS switch embedded in 3D transmission line. , 2007, , .		3
62	High-performance infrared micro-bolometer arrays manufactured using very large scale heterogeneous integration. , 2011, , .		3
63	A MEMS-based passive air flow regulator for handheld breath diagnostics. <i>Sensors and Actuators A: Physical</i> , 2014, 215, 65-70.	4.1	3
64	Temporary wafer bonding and debonding by an electrochemically active polymer adhesive for 3D integration. , 2013, , .		2
65	3D-Printing Enables Fabrication of Swirl Nozzles for Fast Aerosolization of Water-Based Drugs. <i>Journal of Microelectromechanical Systems</i> , 2021, 30, 181-183.	2.5	2
66	MEMS for medical technology applications. , 2007, , .		1
67	Micromechanical Process Integration and Material Optimization for High Performance Silicon-Germanium Bolometers. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1437, 66.	0.1	1
68	A compact passive air flow regulator for portable breath diagnostics. , 2013, , .		1
69	A novel constant flow regulation principle for compact breath diagnostics. , 2014, , .		1
70	Dry reagent storage in dissolvable films and liquid triggered release for programmed multi-step lab-on-chip diagnostics. , 2015, , .		1
71	Transfer printing of nanomaterials and microstructures using a wire bonder. <i>Journal of Micromechanics and Microengineering</i> , 2019, 29, 125014.	2.6	1
72	Demonstration of the First Self-Sealing Aerosol Spray Nozzle for Medical Drug Delivery. , 2019, , .		1

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73	Semi-automated preparation of fine-needle aspiration samples for rapid on-site evaluation. Lab on A Chip, 2022, , .	6.0	1
74	Blood cell quantification on dry blood samples: toward patient-centric complete blood counts. Bioanalysis, 2022, 14, 693-701.	1.5	1
75	Low temperature adhesive wafer bonding using OSTE(+) for heterogeneous 3D MEMS integration. , 2013, , .		0
76	A MEMS-based passive hydrocephalus shunt with adaptive flow characteristics. , 2013, , .		0
77	A Blood Hematocrit Test Strip. , 2019, , .		0
78	First Micro Swirl Nozzle for Fast Drug Delivery to the Lung. , 2021, , .		0